

REMARKS / ARGUMENTS:

Claims 104 and 154 have been cancelled in this action without prejudice to the patentability of the subject matter that is described in such claims.

Claims 103, 108 and 153 have been amended.

Claim 103 has been amended by deleting the description of the plant as a legume and by deleting the language describing the fungicide as being one having no significant activity against fungal plant pathogens for the agronomic plants that are described. The claim is further amended by describing the plant as being one that is not affected by Take-all disease and one which is selected from a specific group of plants. Support for the plant as being one that is not affected by Take-all disease is found in the original specification at least at page 12, line 31 to page 13, line 2, where it is taught that the improvement caused by the present method has been shown in plants for which *Gaeumannomyces graminis* var. *tritici* is not a known disease-causing agent, and at page 2, lines 26 – 28, where it is taught that *G. graminis* causes Take-all disease. The listing of plants is found in the original specification at least at page 16, lines 3 – 14. Claim 103 is further amended by describing the herbicide as one that is selected from a group of four herbicides. Support for this group of herbicides is found in the original specification at least at page 47, line 30 to page 48, line 22, and in original claim 104, which has been cancelled.

Claim 108 has been amended by deleting the description of the herbicides, which has been incorporated into claim 103, and is therefore not required in claim 108.

Claim 153 has been amended by describing the legume as being selected from a group of five. Support for this description of legumes is found in the original specification at least at page 16, lines 3 – 14.

Claims 103, 106, 108 - 110, 112, 117, 134 – 148, 150 and 153 and 155 - 158 are pending in the case.

No new matter has been added.

Rejection of claims 103 – 104, 106, 108 – 110, 112 – 114, 116 – 118, 120, 122 and 134 - 158 under 35 USC §112, first paragraph, as lacking enablement for the full scope of the claims.

It is respectfully requested that the rejection of claims 103 – 104, 106, 108 – 110, 112 – 114, 116 – 118, 120, 122 and 134 - 158 under 35 USC §112, first paragraph, as lacking enablement for the full scope of the claims be reconsidered for the reasons discussed below and be withdrawn.

The claims have been amended so that the scope does not cover legumes in general or herbicides in general. The only plants that are now within the scope of coverage are garden pea, alfalfa, peanuts, soybeans, vetch, cowpeas, fava bean, trefoil, clovers and *Phaseolus spp.* beans, all of which are legumes. Likewise, the only herbicides that are now within the scope of the claim are glyphosate, glufosinate, imidazolinone herbicides, and sulfonylurea herbicides.

Moreover, the claims do not now describe the fungicide as being one having no significant activity against fungal plant pathogens for the agronomic plants that are described. Accordingly, the skilled practitioner would now not have to carry out any experimentation at all to practice the full scope of the claims. This is because each and every element of the claims is described in clear and definite terms. The fungicide is described in terms of its chemical structure, the plants are particularly described, the herbicides are limited to a short listing of particular herbicides, and the techniques of all method steps are described in the specification and exemplified in the examples.

In the Action of April 13, 2007, at page 20, lines 3 - 6, the Office argues that "the Examiner notes that the claims even as amended encompass methods involving a number of different plants, such as soybeans, peas and alfalfa, and a number of different and varying fungicides having different chemical formulas that would not be expected to have the same chemical/biochemical activity or yield the same plant treatment results." (underline added). The Office provides no evidence or reasoning to support this conclusion. On the other hand, the Applicant has shown evidence of the efficacy of silthiofam on soybeans, with or without the presence of an inoculant. The specification provides a clear written description of the full scope of the claims. And, the Applicant has asserted that without evidence to the contrary the skilled practitioner would reasonably expect that fungicides having a general structure that encompasses silthiofam (as shown in claim 103) would have the same or similar biological activity on a narrow group of leguminous plants that include soybeans, because of the similarity in

the chemical structure of the fungicides and the commonality of biological pathways of the narrow group of leguminous plants. Accordingly, the Applicant maintains that the invention is fully enabled by the original specification and claims.

The Office argues that the Declaration of Mr. Ernest F. Sanders was submitted by the Applicants as evidence that the claims are fully enabled and that because the Declaration was filed long after the filing date of the application, it cannot be used to show enablement of the present invention. With due respect, the Sanders Declaration was filed as evidence that the enabling discussion presented in the original specification and claims regarding the activity of the fungicide on yield and vigor of plants whether or not an inoculant was present were, in fact, valid. It is established law that when a claim of an application is rejected, evidence can be submitted to traverse the rejection by way of a declaration under 37 C.F.R. §1.132.

For these reasons and for the reasons provided previously, the Applicants respectfully maintain that the present claims are enabled by the original specification and that the present ground of rejection should be reconsidered and withdrawn.

Rejection of claims 103 – 104, 106, 109, 110, 112 – 114, 116, 118 and 134 – 158 under 35 USC §103(a) over article by Roy *et al.*, in view of either U.S. Patent No. 5,486,621 to Phillion *et al.*, or U.S. Patent No. 5,994,270 to Phillion *et al.*, and further in view of U.S. Patent No. 5,914,451 to Martinell *et al.*, and U.S. Patent No. 6,277,847 to Theodoridis *et al.*

In the Action dated April 13, 2007, the Office maintained its rejection of claims 103 – 104, 106, 109, 110, 112 – 114, 116, 118 and 134 – 158 under 35 USC §103(a) over the article by Roy *et al.*, in view of either U.S. Patent No. 5,486,621 to Phillion *et al.*, or U.S. Patent No. 5,994,270 to Phillion *et al.*, and further in view of U.S. Patent No. 5,914,451 to Martinell *et al.*, and U.S. Patent No. 6,277,847 to Theodoridis *et al.*

The arguments that the Applicants have previously submitted to overcome this ground of rejection are reasserted here. The Applicants respectfully request that the ground of rejection be reconsidered for those and the following reasons.

In the Action dated April 13, 2007, in response to Applicant's arguments, the Office asserts that "[a]ccordingly, in view of the entirety of Roy *et al.*'s teachings, it is

considered that Roy *et al.* is merely disclosing that the specific strain [of *G. graminis*] having the specific characteristics found to be expressed in soybean have either not yet been found in wheat, or that the specific lobed characteristic is for some reason not expressed in wheat, and not that the particular strain of *G. graminis* is not capable of infection of wheat, as asserted by Applicants". The Office then reasserts its conclusion that the cited combination of art would have provided a skilled practitioner with a reasonable expectation that treatment of soybeans with a silthiofam-type fungicide would reduce the likelihood of infection of a subsequently planted wheat crop with take-all disease.

With respect, the Applicant has not argued that the *G. graminis* described in the Roy *et al.* article was not capable of infection of wheat, as the Office has asserted.

Applicant's argument, in fact, was:

"As a first matter, Roy *et al.* do not teach that the *G. graminis* fungus infecting the soybean can be transmitted to subsequently planted wheat, even stating "we have not isolated the lobed hyphopodial strain of *G. graminis* [the strain they isolated from soybeans] from field-grown wheat" (See page 825, second column, second paragraph). Moreover, Roy *et al.* conclude (p.825, end of second column): "Our study indicates there is reason to suspect that the inoculum of *G. graminis* [to infect wheat planted following legumes] may increase through its survival on soybean tissues." (underline added) Thus, the actual teachings of Roy *et al.* fall short of teaching that infection of soybean with *G. graminis* may be at least partially responsible for the heightened occurrence of take-all disease in subsequently planted wheat or cereal crops, as argued by the Office.

Accordingly, the article by Roy *et al.* fails to provide the teaching that is required to support the reasoning of the Office. Furthermore, even the Office's own characterization that the Roy *et al.* article "may be at least partially" provide the required teaching, itself falls short of the requirement for obviousness set by 35 USC §103(a), namely that the actions suggested by the prior art must cause the skilled practitioner to have a reasonable expectation of success. A disclosure that describes its teachings in terms of "reason to suspect" and "may increase",

and which is characterized by the Office as "may be at least partially", cannot be argued to teach a critical feature necessary to establish obviousness.

The Phillion *et al.* references indeed disclose fungicides with activity against take-all disease. However, the conclusion that it would have been obvious to treat soybeans that might be infected with *G. graminis*, which has no effect on soybeans, with fungicides having activity against *G. graminis*, with the expectation that such treatment might reduce the threat of *G. graminis* to wheat or cereal crops that might be subsequently be planted, is simply unreasonable. In other words, applying an expensive fungicide to a crop that does not need it in the hope of reducing infection of a crop that might subsequently be planted is not only not obvious, it would be considered to be an enormous waste. The skilled practitioner would simply apply the fungicide to the wheat when and if it were planted."

Furthermore, even if the rationale of the Office is accepted completely, it still fails to teach that such treatment of the soybean crop would be expected to increase the yield and/or the vigor of the soybean crop – as is required by the present claims.

With respect, the Applicant maintains that the combination of prior art that is cited as making the present claims obvious simply falls short of making a *prima facie* case of obviousness under 35 USC §103(a). It is believed that the Office's argument, reduced to its essence, is: because of the teaching by Roy *et al.* that the presence of *G. graminis* (Gg) on soybeans having no indication of infection might cause a higher level of Gg infection of after-planted wheat (the extent of Roy's pertinent teaching), it would have been obvious to treat soybeans with silthiofam because treatment of soybeans that might harbor Gg might avoid Gg infection of wheat that might be planted after the beans.

This reasoning fails to support a *prima facie* case of obviousness for several reasons, among them are: (1) the Office has cited no teaching that treatment of soybeans with silthiofam would have any effect on *G. graminis* on soybeans, also (2) the Office has cited no teaching that treatment of soybeans with silthiofam or any other pesticide has any effect on a subsequent crop, and (3) the Office has cited no teaching that treatment of soybeans with an agent having activity against *G. graminis* would be

expected to affect the yield and/or the vigor of the soybeans. Each one of these steps would require significant research work to prove (as Roy *et al.* acknowledge for the first two), and that work has not been cited by the Office.

Accordingly, it is respectfully requested that the present ground of rejection be reconsidered and be withdrawn.

Rejection of claims 108 and 117 as obvious under 35 USC §103(a) over article by Roy *et al.*, in view of either U.S. Patent No. 5,486,621 to Phillion *et al.*, or U.S. Patent No. 5,994,270 to Phillion *et al.*, and further in view of U.S. Patent No. 5,914,451 to Martinell *et al.*, and U.S. Patent No. 6,277,847 to Theodoridis *et al.*, and further in view of U.S. Patent No. 4,136,486 to Franklin, Jr. *et al.*

It is respectfully requested that the rejection of claims 108 and 117 as obvious under 35 USC §103(a) over article by Roy *et al.*, in view of either U.S. Patent No. 5,486,621 to Phillion *et al.*, or U.S. Patent No. 5,994,270 to Phillion *et al.*, and further in view of U.S. Patent No. 5,914,451 to Martinell *et al.*, and U.S. Patent No. 6,277,847 to Theodoridis *et al.*, and further in view of U.S. Patent No. 4,136,486 to Franklin, Jr. *et al.*, be reconsidered for the reasons discussed below and be withdrawn.

Claims 108 and 117 depend ultimately from claim 103 and add the description that the seed is treated with an inoculant. The Office has argued that Franklin Jr. *et al.* teach the use of an inoculant and that it would have been obvious to use the inoculants in the methods of Roy *et al.*, the Phillion *et al.* references, Martinell *et al.* and Theodoridis *et al.*, with the expectation of achieving improved growth in soybean plants.

As the Applicant has pointed out previously, the combination of Roy *et al.*, the Phillion *et al.* references, Martinell *et al.* and Theodoridis *et al.*, fails to provide a motivation or suggestion to increase the vigor and/or the yield of a leguminous plant by treating the plant or its propagation material with a fungicide of a specific composition which has no significant activity against fungal plant pathogens for the plant, wherein the plant or its propagation material possesses a transgenic event providing the plant with resistance to a herbicide and the treatment comprises foliar application of said herbicide, as required in the present claims. The Franklin Jr. *et al.* reference fails to add this required teaching.

Accordingly, it is respectfully requested that the present ground of rejection be reconsidered and be withdrawn.

Provisional rejection of claims 103, 104, 106, 108 – 110, 112 – 114, 116 – 118, 120, 122 and 134 – 158 under nonstatutory obviousness-type double patenting over claims 111 – 113, 115 – 117 and 122 – 125 of copending Application No. 11/138,965 as published in U.S. Patent Application Publication No. 2005/0233905.

Reconsideration of the provisional double patenting rejection (nonstatutory) of claims 103, 104, 106, 108 – 110, 112 – 114, 116 – 118, 120, 122 and 134 – 158, in view of claims 111 – 113, 115 – 117 and 122 – 125 of copending Application No. 11/138,965, as published in U.S. Patent Application Publication No. 2005/0233905, is respectfully requested for the reasons asserted in the Applicant's Response dated February 2, 2007.

After the withdrawal of the grounds of rejection discussed above, this double patenting rejection is the only rejection remaining in the present application and therefore, Applicants submit that this rejection should be withdrawn, consistent with the clear language of the MPEP.

Request for reconsideration:

It is respectfully requested that the claims be reconsidered after consideration of the reasons for allowability that are discussed above and be found to be allowable. If one or more of the claims are found to not be allowable, a telephone call to the undersigned would be appreciated in order to resolve any remaining issues.

Respectfully submitted,

Nelson Mullins Riley & Scarborough, LLP



Charles E. Dunlap, Ph.D., Esq.
Registration No. 35,124

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1320 Main Street, 17th Floor
Columbia, SC 29201
Telephone: (864) 250-2238
Facsimile: (803) 255-9831
Customer No. 45850